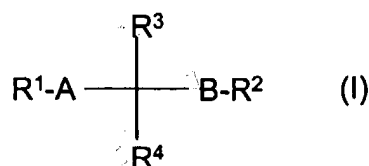


IN THE CLAIMS:

1. (Presently amended) A chemical compound represented by ~~the general formula~~ Formula I



or a pharmaceutically acceptable salt or a hydrate thereof,  
wherein,

A and B, independently of each another represent  
a group of the formula  $-(\text{CH}_2)_n-$ ,  
wherein n represents 0, or ~~1, 2, 3 or 4~~;

$\text{R}^1$  and  $\text{R}^2$ , independently of each other ~~another~~, represent  
~~alkyl, cycloalkyl, amino, trihalogenmethyl, nitro, cyano, or~~  
~~phenyl, or a group of the formula  $-\text{OR}'$ ,  $-\text{SR}'$ ,  $-\text{C}(\text{O})\text{R}'$ ,  $-\text{C}(\text{S})\text{R}'$ ,~~  
 ~~$-\text{CH}_2\text{OR}'$ ,  $-\text{CH}_2\text{SR}'$ ,  $-\text{NR}'\text{C}(\text{O})\text{R}''$ , or  $-\text{OC}(\text{O})\text{R}'$ ; and/or a phenyl or a~~  
benzyl group or a mono-heterocyclic aromatic group selected from  
the group consisting of ~~1,3,2,4 or 1,3,4,5 dioxadiazolyl,~~  
~~dioxatriazinyl, dioxazinyl, 1,2,3, 1,2,4, 1,3,2 or 1,3,4~~  
~~dioxazolyl, 1,3,2,4 or 1,3,4,5 dithiadiazolyl, dithiatrizinyl,~~  
~~dithiazinyl, 1,2,3 dithiazolyl,~~ furanyl, furazanyl, imidazolyl,

~~isoimidazolyl, 2 isoimidazolyl, isoindazolyl, isothiazolyl,~~  
~~isoxazolyl, 1,2,3, 1,2,4, 1,2,5 or 1,3,4 oxadiazolyl,~~  
~~oxatetrazinyl, oxatriazinyl, 1,2,3,4 or 1,2,3,5 oxatriazolyl,~~  
~~oxazolyl, pyrazinyl, pyrazolyl, pyridazinyl, pyridinyl,~~  
~~pyrimidinyl, pyrrolyl (azolyl), 1,2,3,4 or 2,1,3,4 tetrazolyl,~~  
~~thiadiazolyl, thiazolyl, thienyl, 1,2,3, 1,2,4 or 1,3,5~~  
~~triazinyl, and 1,2,3, 1,2,4, 2,1,3 or 4,1,2 triazolyl or a~~  
~~polyheterocyclic aromatic group selected from the group consisting~~  
~~of acridinyl, benzimidazolyl, 1,2 or 1,4 benzisothiazinyl, 1,2 or~~  
~~1,4 benzisoxazinyl, benzisoxazole, benzothiazolyl, benzofuranyl,~~  
~~isobenzofuranyl, 2,3 benzopyronyl, 1,2,3,4 benzetetrazinyl,~~  
~~1,3,4,6 benzetetrazolyl, benzothiazolyl, 1,2,3 or 1,2,4~~  
~~benzotriazinyl, and 1,2,3-benzotriazolyl 1,2,3 or 2,1,3~~  
~~benzotriazolyl, benzoxadiazolyl, benzoxazolyl, carbazolyl,~~  
~~einnolinyl, coumarinyl, indazolyl, indolyl, isoindolyl,~~  
~~indolizinyl, purinyl, phenazinyl, phenothiazinyl, phenanthridinyl,~~  
~~phthalazinyl, pteridinyl, quinolinyl, quinexalinyl, isequinolinyl,~~  
~~quinazolinyl, quinolizinyl, and xanthrenyl, wherein said phenyl,~~  
~~benzyl or heteroaryl groups are unsubstituted or are substituted~~  
~~one or two times with substituents selected from the group~~  
~~consisting of halogen, trihalogenmethyl, alkyl, amino, nitro,~~

cyano, ~~amide~~, a group of the formula  $-OR'$  and  ~~$SR'$~~ , a and phenyl and a ~~phenoxy group~~;

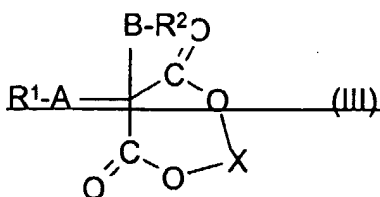
wherein  $R'$  and  $R''$ , independently of each ~~another~~ other, represent hydrogen, alkyl, cycloalkyl, ~~or a group of the formula  $NR'''R''''$~~ , wherein  ~~$R'''$  and  $R''''$ , independently of each another, represent hydrogen or alkyl~~;

$R^3$  and  $R^4$ , independently of each other ~~another~~, represent

$-C(O)R'$ , or  $-C(O)OR'$ , ~~or  $-C(O)NR'R''$~~ ;

wherein  $R'$  and  $R''$ , independently of each other ~~another~~, represent hydrogen, alkyl, cycloalkyl, or a group of the formula  $NR'''R''''$ , wherein  $R'''$  and  $R''''$ , independently of each another, represent hydrogen or alkyl;

~~or  $R^3$  and  $R^4$  together form a heterocyclic 6-9 membered ring to give a diester derivative of the general formula III~~

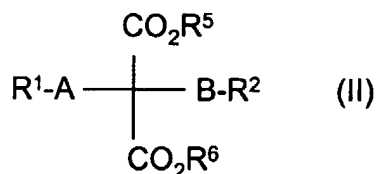


wherein

~~A, B,  $R^1$  and  $R^2$  are as defined above, and~~

~~X represents a carbon chain of the formula  $(CH_2)_n$ , wherein n is 1, 2, 3 or 4.~~

2. (Presently amended) The ~~chemical~~ compound according to claim 1, which is a malonic acid ester derivative of ~~the general formula~~ Formula II



or a pharmaceutically acceptable salt or a hydrate thereof, wherein,

A, B, R<sup>1</sup> and R<sup>2</sup> are as defined above, and

R<sup>5</sup> and R<sup>6</sup>, independently of each another, represent hydrogen, alkyl, cycloalkyl, or a group of the formula NR'''R''', wherein R''' and R''', independently of each another, represent hydrogen or alkyl.

3-5. (Cancelled)

6. (Presently amended) The ~~chemical~~ compound according to claim 1, wherein R<sup>1</sup> and R<sup>2</sup> independently of each other represent ~~another represents a hydroxy group; an alkyl group; an alkoxy group; a group of the formula -OC(O)R' wherein R' is hydrogen or alkyl; a group of the formula -NHC(O)R'', wherein R'' is hydrogen or alkyl; a phenyl or a benzyl group, wherein said phenyl and~~

benzyl groups are unsubstituted or substituted one or two times with substituents selected from the group consisting of alkyl, alkoxy, halogen,  $\text{CF}_3$ , CN, amino, and ~~nitro, and a group of the formula  $\text{NHC(O)R}'$ , wherein  $\text{R}'$  is hydrogen, alkyl or phenyl;~~ and/or a 5- or 6-membered mono- or poly-heterocyclic group, wherein ~~said mono heterocyclic group is selected from the group consisting of 1,3,2,4 or 1,3,4,5 dioxadiazolyl, dioxatriazinyl, dioxazinyl, 1,2,3, 1,2,4, 1,3,2 or 1,3,4 dioxazolyl, 1,3,2,4 or 1,3,4,5 dithiadiazolyl, dithiatrizinyl, dithiazinyl, 1,2,3 dithiazolyl, furanyl, furazanyl, imidazolyl, isoimidazolyl, 2 isoimidazolyl, isoindazolyl, isothiazolyl, isoxazolyl, 1,2,3, 1,2,4, 1,2,5 or 1,3,4 oxadiazolyl, oxatetrazinyl, oxatriazinyl, 1,2,3,4 or 1,2,3,5 oxatriazolyl, oxazolyl, pyrazinyl, pyrazolyl, pyridazinyl, pyridinyl, pyrimidinyl, pyrrolyl (azolyl), 1,2,3,4 or 2,1,3,4 tetrazolyl, thiadiazolyl, thiazolyl, thienyl, 1,2,3, 1,2,4 or 1,3,5 triazinyl, and 1,2,3, 1,2,4, 2,1,3 or 4,1,2 triazolyl and said polyheterocyclic group is selected from the group consisting of acridinyl, benzimidazolyl, 1,2 or 1,4 benzisothiazinyl, 1,2 or 1,4 benzisoxazinyl, benzisoxazole, benzothiazolyl, benzofuranyl, isobenzofuranyl, 2,3 benzopyronyl, 1,2,3,4 benzetetrazinyl, 1,3,4,6 benzetetrazolyl, benzothiazolyl, 1,2,3 or 1,2,4 benzetriazinyl, 1,2,3 or 2,1,3 benzetriazolyl~~ and 1,2,3-

benzotriazolyl, ~~benzoxadiazolyl~~, ~~benzoxazolyl~~, ~~carbazolyl~~,  
~~cinnolinyl~~, ~~coumarinyl~~, ~~indazolyl~~, ~~indolyl~~, ~~isoindolyl~~,  
~~indolizinyll~~, ~~purinyl~~, ~~phenazinyl~~, ~~phenothiazinyl~~, ~~phenanthridinyl~~,  
~~phthalazinyl~~, ~~pteridinyl~~, ~~quinolinyl~~, ~~quinoxalinyl~~, ~~isoquinolinyl~~,  
~~quinazolinyl~~, ~~quinolizinyll~~, and ~~xanthrenyl~~, and wherein said 5- or  
6-membered mono- or poly-heterocyclic heterocyclic group is  
unsubstituted or substituted one or two times with substituents  
selected from the group consisting of halogen, CF<sub>3</sub>, CN, amino, and  
nitro.

7. (Withdrawn, presently amended) The chemical compound  
according to claim 6, wherein R<sup>1</sup> and R<sup>2</sup> independently of each  
~~another represents~~ other represent phenyl; 2, 3 or 4-alkylphenyl;  
2,3 or 4-alkylbenzyl; 2, 3 or 4-alkoxyphenyl; 2, 3 or 4-  
alkoxybenzyl; 2, 3 or 4-chlorophenyl; 2, 3 or 4-chlorobenzyl; 2, 3  
or 4-fluorophenyl; 2, 3 or 4-bromobenzyl; 2, 3 or 4-bromophenyl; ~~2,~~  
~~3 or 4 chlorobenzyl~~; 2, 3 or 4-aminophenyl; 2, 3 or 4-aminobenzyl;  
2, 3 or 4-nitrophenyl; 2, 3 or 4-nitrobenzyl; 2, 3 or 4-  
trifluoromethylphenyl; ~~2, 3 or 4 benzoylamino phenyl~~; ~~2, 3 or 4~~  
~~benzoylamino benzyl~~; ~~2, 3 or 4 acetylamino phenyl~~; ~~2, 3 or 4~~  
~~acetylamino benzyl~~; 2, 3 or 4-trifluoromethylbenzyl; 2-nitro-4-  
trifluoromethyl-5-chlorophenyl and/or ~~or~~ 2-nitro-4-trifluoromethyl-

5-chlorobenzyl.

8. (Cancelled)

9. (Presently amended) The ~~chemical~~ compound according to claim 6, wherein the mono-heterocyclic group is selected from the group consisting of 2- or 3-furanyl, 2-, 4- or 5-imidazolyl, 3-, 4- or 5-isoxazolyl, 2-, 3- or 4-pyridinyl, and 2- or 3-thienyl.

10. (Withdrawn, presently amended) The ~~chemical~~ compound according to claim 9, wherein the mono-heterocyclic group is 4-(3,5-demethyl)-isoxazolyl.

11. - 13. (Cancelled)

14. (Withdrawn, presently amended) The ~~chemical~~ compound according to claim 6, herein the heteroalkyl group is furan-2-ylmethyl or pyridinyl-methyl ~~furfuryl, or picolyl.~~

15. (Presently amended) The ~~chemical~~ compound according to claim 1, wherein the chemical compound is ~~Diethyl 2-(4-fluorophenyl)-2-(3-picolyl)malonate,~~

~~Diethyl 2-(4-nitrophenyl)-2-(2-picolyl)malonate;~~

~~Diethyl 2-(4-nitrophenyl)-2-(4-picolyl)malonate;~~

~~Diethyl 2-phenyl-2-(3-picolyl)malonate;~~

~~Diethyl 2-(5-chloro-2-nitro-4-(trifluoromethyl)phenyl)-2-(3-picolyl)malonate;~~

~~Diethyl 2-benzyl-2-(3-picolyl)malonate;~~

Diethyl 2-(4-fluorophenyl)-2-(pyridin-3-yl-methyl)malonate;

Diethyl 2-(4-nitrophenyl)-2-(pyridin-2-yl-methyl)malonate;

Diethyl 2-(4-nitrophenyl)-2-(pyridin-4-yl-methyl)malonate;

Diethyl 2-phenyl-2-(pyridin-3-yl-methyl)malonate;

Diethyl 2-(5-chloro-2-nitro-4-(trifluoromethyl)phenyl)-2-(pyridin-3-yl-methyl)malonate;

Diethyl 2-benzyl-2-(pyridin-3-yl-methyl)malonate;

Diethyl 2-(4-nitrophenyl)-2-[(benzotriazol-1-yl)methyl]malonate;

~~Diethyl 2-(2-thienyl)-2-(2-picolyl)malonate~~ Diethyl 2-(2-thienyl)-2-(pyridin-2-yl-methyl)malonate;

~~Diethyl 2-(4-(acetylamino)phenyl)-2-(2-picolyl)malonate;~~

~~Diethyl 2-(4-(benzoylamino)phenyl)-2-(2-picolyl)malonate;~~

~~2-(4-nitrophenyl)-2-(2-picolyl)malononitril;~~

Diethyl 2-(2-thienyl)-2-(4-nitrophenyl)malonate;

Diethyl 2-(2-thienyl)-2-(3,5-dimethylisoxazol-4-ylmethyl)malonate;

Diethyl 2-(2-thienyl)-2-(2-chlorobenzyl)malonate;



~~Dimethyl 2-methoxy-2-(2-picoly)malonate;~~

~~Diethyl 2-acetamido-2-(2-picoly)malonate;~~

Dimethyl 2-methoxy-2-(pyridin-2-yl-methyl)malonate;

Diethyl 2-acetamido-2-(pyridin-2-yl-methyl)malonate;

Diethyl 2-acetamido-2-(2-chlorobenzyl)malonate;

Diethyl 2-acetamido-2-(3-chlorobenzyl)malonate;

Diethyl 2-(4-nitrophenyl)-2-(3,5-dimethylisoxazol-4-ylmethyl)malonate;

Diethyl 2-(4-nitrophenyl)-2-(benzotriazol-1-ylmethyl)malonate;

~~Diethyl 2-(p-tolyl)-2-(2-picoly)malonate;~~

~~Diethyl 2-(2-thienyl)-2-(2-picoly)malonate;~~

~~Diethyl 2-(2-chlorophenyl)-2-(2-picoly)malonate;~~

Diethyl 2-(4-methyl-phenyl)-2-(pyridin-2-yl-methyl)malonate;

Diethyl 2-(2-thienyl)-2-(pyridin-2-yl-methyl)malonate;

Diethyl 2-(2-chlorophenyl)-2-(pyridin-2-yl-methyl)malonate;

Diethyl 2-(2-bromobenzyl)-2-(4-nitrophenyl)malonate;

~~Di-t-butyl 2-(4-nitrophenyl)-2-(2-picoly)malonate;~~

~~Diethyl 2-(4-fluorophenyl)-2-(2-picoly)malonate;~~

Di-t-butyl 2-(4-nitrophenyl)-2-(pyridin-2-yl-methyl)malonate;

Diethyl 2-(4-fluorophenyl)-2-(pyridin-2-yl-methyl)malonate;

~~Diethyl 2-(4-methoxy)-2-(2-picoly)malonate;~~

~~Diethyl 2-(4-nitrophenyl)malonate;~~

~~Diethyl 2-(5-chloro-2-nitro-4-trifluoromethylphenyl)malonate;~~

~~Diethyl 2,2-bis(2-picoly)malonate;~~

Diethyl 2,2-bis(pyridin-2-yl-methyl)malonate;

~~Diethyl 2-(2-picoly)malonate;~~

~~Di-t-butyl 2-(4-nitrophenyl)malonate;~~

Diethyl 2-phenyl-2-(acetoxymethyl)malonate;

~~2-Chlorophenylacetonitrile;~~

~~2-(2-Chlorophenyl)butyronitrile;~~

~~2-(2-Chlorophenyl)-2-ethylbutyronitrile;~~

~~2-(3-Phenoxyphenyl)butyronitrile;~~

~~2-Ethyl-2-(3-phenoxyphenyl)butyronitrile;~~

~~Ethyl 2-(4'-chlorophenyl)-2,2-diallyl-acetate;~~

~~Ethyl 1-(4'-chlorophenyl)cyclopent-3-ene-1-carboxylate;~~

~~Ethyl 1-(4-chlorophenyl)cyclopentane-1-carboxylate;~~

~~1-(4-Chlorophenyl)-1-(3-methyl-5-oxadiazolyl)cyclopentane;~~

~~N,N-Dimethyl-1-(4-chlorophenyl)cyclopentane-1-carboxamide;~~

~~N,N-Diethyl-1-(4-chlorophenyl)cyclopentane-1-carboxamide;~~

~~N-Phenyl-1-(4-chlorophenyl)cyclopentane-1-carboxamide;~~

~~Diethyl 2-phenyl-2-(hydroxymethyl)malonate;~~

~~Dicyclopropan(4-chlorophenyl)carbinol;~~

~~O-(2-picoly)-dicyclopropan(4-chlorophenyl)carbinol;~~

Diethyl 2-(2-thienyl)malonate; or

Diethyl 2-(4-aminophenyl)-2-(pyridin-2-yl-methyl)malonate;

~~Diethyl 2-(4-aminophenyl)-2-(2-picolyl)malonate;~~

~~2-(4-nitrophenyl)malononitril;~~

~~2-Cyano-2-(4-nitrophenyl)-3-(2-pyridyl)propionamide;~~

~~Diethyl 2-(4-(benzoylamino)phenyl)-2-(2-picolyl)malonate;~~

~~Diethyl 2-(4-(acetylamino)phenyl)-2-(2-picolyl)malonate;~~

~~Diethyl 2-(2-chlorophenyl)malonate;~~

~~Diethyl 2-(4-fluorophenyl)malonate;~~

~~Diethyl 2-(4-methoxyphenyl)malonate;~~

~~Diethyl 2-bromobenzylmalonate; or~~

~~Diethyl 4-chlorobenzylidenemalonate;~~

or a pharmaceutically acceptable salt or a hydrate thereof.

16. - 23. (Cancelled)

24. (Presently amended) A method of treatment or alleviation of a disease or disorder or a condition of a living animal, including a human, which disorder or disease or condition is responsive to modulation of SKCa, IKCa and/or BKCa channels, comprising the step of administering to such a living animal body, including a human, in need thereof a therapeutically effective amount of a chemical compound ~~represented by the general formula~~

(I) of claim 1, or a pharmaceutically-acceptable addition salt thereof.

25. (Original) The method of claim 24 for the treatment or alleviation of respiratory diseases such as asthma, cystic fibrosis, chronic obstructive pulmonary disease and rhinorrhea, convulsions, vascular spasms, coronary artery spasms, renal disorders, polycystic kidney disease, bladder spasms, urinary incontinence, bladder outflow obstruction, irritable bowel syndrome, gastrointestinal dysfunction, secretory diarrhoea, ischaemia, cerebral ischemia, ischaemic heart disease, angina pectoris, coronary heart disease, traumatic brain injury, psychosis, anxiety, depression, dementia, memory and attention deficits, Alzheimer's disease, dysmenorrhea, narcolepsy, Reynaud's disease, intermittent claudiction, Sjorgren's syndrome, migraine, arrhythmia, hypertension, absence of seizures, myotonic muscle dystrophia, xerostomi, diabetes type II, hyperinsulinemia, premature labour, baldness, cancer and immune suppression.